CLAIMS

1. An adjustable joint for fixing a pair of members in a chosen positional relationship, comprising:

a pair of knuckles, each attached to one of said members, each knuckle having an internally splined central hole;

a cylindrical pin formed with axially extending splines adapted to be inserted through said internally splined holes of the two knuckles; and

means for locking the pin in the holes to thereby fix the positional relationship of the two knuckles and their attached members.

2. The adjustable joint of claim 1 wherein each knuckle is attached to one of said members by means of a splined connection comprising a cylindrical member having axially extending splines and a hole having internal splines, the cylindrical member being adapted to be inserted into the hole in such a way as to rotationally adjust the position of the knuckle relative to the member about the central axis of the cylindrical member, whereby the rotational position of each member relative to its knuckle may be adjusted and the rotational position of the knuckles may be adjusted relative to one another.

3. The adjustable joint of claim 1 wherein each knuckle has a planar face and its internally splined central hole is formed about an axis substantially

perpendicular to the planar face, whereby the means for locking the pin in the two holes forces the planar faces of the two knuckles into abutment with one another.

4. The adjustable joint of claim 3 wherein at least one of the internally splined central holes which is formed substantially perpendicular to the planar face of its knuckle is slightly angled with respect to the said planar face so that the action of locking the pin in the holes stresses the pin.

5. The adjustable joint of claim 1 wherein the internally splined central holes in the two knuckles are formed with different numbers of splines, the two numbers not having a common denominator, and the cylindrical pin has a head end, a first cylindrical splined section of larger diameter joined to the head end, and a second cylindrical section of smaller diameter joined to the end of the first cylindrical section, the two cylindrical sections being formed with splines of different numbers, corresponding to the numbers of splines in the first and second splined central holes of the knuckles, whereby the rotational position of the knuckles may be adjusted to a resolution which represents a multiple of the two spline counts.

6. The adjustable joint of claim 5 wherein the angular relationship between the central hole in each of the knuckles and the center line of the splined connection between the knuckle and its associated member deviates from the

perpendicular, whereby upon locking the pin in the two members both the splined connection between the knuckles and their associated members and the pin connection between the two knuckles are stressed.

7. An adjustable position support stand for an article, comprising:

a pair of elongated links;

a base for securing a first end of the first of said links to a supporting structure;

means for fixing said article to a first end of the second of said links; and

an adjustable joint for fixing the second ends of each of the pair of links to one another in a chosen positional relationship, said joint comprising:

a pair of knuckles, each attached to one of said links, each knuckle having an internally splined central hole;

a cylindrical pin formed with axially extending splines adapted to be inserted through the internally splined holes of the two knuckles; and

means for locking the pin in the holes to thereby fix the positional relationship of the two knuckles and their attached links.

8. The adjustable joint of claim 7 wherein each knuckle has a planar face and the internally splined central hole of each knuckle is formed about an axis substantially perpendicular to the planar face, whereby said means for locking the pin

in the holes to thereby fix the positional relationship of the two knuckles and their attached links forces said two planar faces of the two knuckles into engagement with one another.

9. The adjustable joint of claim 8 wherein at least one of the internally splined central holes in a knuckle is formed at an angle that deviates slightly from the perpendicular to the planar face, whereby said means for locking the pins in the holes to thereby fix the positional relationship of the two knuckles and their attached links, bringing the planar faces into abutment with one another, prestresses the cylindrical pin.

10. The adjustable joint of claim 7 wherein the central holes formed in the two knuckles have different diameters and the splines formed in the central holes have a different spline count, without a common denominator to the two spline counts, and the cylindrical pin comprises a head, a first large diameter section extending from the head, and a second smaller diameter section extending from the end of the first cylindrical section, the pin being adapted to pass through the central hole in the knuckle having the larger internal central hole and then through the central hole in the knuckle having the smaller central hole, and the two cylindrical sections of the pin having spline counts which correspond with the spline counts of the central holes in which they fit.